MARSHALL STAR

Marshall Space Flight Center **May 25, 2000**

"We bring people to space — We bring space to people"

Photo by Doug Stoffer, NASA/Marshall Space Flight Center

A Sparkles Welcome to Open House

Large and small visitors to Marshall's Open House Saturday enjoy Sparkles the Clown and his tricks. For full coverage of Open House in photos, see pages 6-8.

Boeing delivers X-40A vehicle

by Marianne Higgins

Marking a major milestone in the Marshall-managed X-37 project, an 85-percent scale test vehicle of the experimental space plane was delivered to Dryden Flight Research Center at Edwards, Calif., May 19 for flight testing.

The X-40A test vehicle was first built for the Air Force by The Boeing Company at its Seal Beach, Calif., facility, and successfully flight tested at Holloman Air Force Base, N.M. At Dryden, the X-40A will undergo a series of ground and air tests later this year to reduce possible risks to the larger X-37 — including a drop test from a helicopter to check guidance and navigation systems planned for use in the X-37.

*See **X-40A** on page 9*

Fastrac engine development team wins technology award

The team of Marshall engineers who designed and developed the new Fastrac rocket engine that will be used for the first powered flight of NASA's X-34 technology demonstrator was honored May 18 for helping NASA achieve its goal of low-cost access to space.

NASA's Office of Aerospace Technology presented the Fastrac engine team with an award for developing technology aimed at reducing the cost to launch a pound of payload from $10,000 to $1,000 by 2010.

The award was presented at the "Turning Goals Into Reality" conference in Huntsville. The conference, May 18-19 at the Marshall Center, focused on recent aerospace accomplishments by NASA and its industry partners, and the future of air and space transportation technology.

Fastrac is a 60,000-pound-thrust engine fueled by a mixture of liquid oxygen and kerosene. It's less expensive than similar engines because of an innovative design approach that uses commercial, off-the-shelf parts and fewer of them. Common manufacturing methods are used, so building the engine is relatively easy and not as labor-intensive as manufacturing typical rocket engines. Each Fastrac engine will initially cost approximately $1.2 million – about one-fourth the cost of similar engines.

"The Fastrac team challenged and reinvented the traditional design process used for engine development," said Dr. Row Rogacki, director of Marshall's Space Transportation Directorate.

See related story on page 3

"Engineering and test activities have been streamlined. State-of-the-art modeling and analysis techniques and crisp, effective communication enhanced the design and development of the Fastrac engine."

As the first engine developed in house by engineers at the Marshall Center, Fastrac leapt from the drawing board to full-engine testing in less than three years – a much faster than usual design cycle for rocket engines.

Full-engine, hot-fire testing began in March 1999 at NASA's Stennis Space Center, Miss. In May 1999, the complete engine system was tested for the first time at full power for 150 seconds,

*See **Fastrac** on page 3*

"The Only Good Job is a Safe Job"
— Safety slogan submitted by
Ralph Allen, AD22

Managing Your Career

The link between personality and health

Editor's note: The following article is reprinted from the NASA HQ Bulletin.

by Evelin Saxinger

Americans have been besieged with information on what the body needs or doesn't need to be healthy.

Avoid saturated fats, don't smoke, eat broccoli, exercise regularly, get enough sleep — advice like this is fed to us regularly in newspapers, magazines, books and on the television.

Sometimes these rapidly accumulating rules seem like a recipe for health to which the doctors are continually adding new ingredients. By following these rules, good health is a goal that, when achieved, makes it possible for us to enjoy the important parts of our lives.

One of the significant messages of the new mind-body research is that good health is more than following rules. Health emerges from hope, optimism, laughter, connectedness, support, commitment, self-worth, a sense of control and perhaps something more: the perception that our behavior plays some unique role. At the same time, these forces for health should not be thought of as emotional and interpersonal inoculations against disease.

Photo by Emmett Given, NASA/Marshall Space Flight Center

From left, Dianetta Williams, Deborah Howard and Beverly Lee, all Marshall contractors with Infinity Technology Inc., participate in the annual fitness walk held as part of Health Expo 2000. The Marshall Center uses events like the health expo to promote fitness and health in the work force.

Mental health

Physical and mental health do not necessarily incorporate the importance of meaning, purpose and wholesome balance. According to the larger definition, no one who perceives life as meaningless is truly healthy, no matter how lengthy and disease-free the person's life may be; and anyone who finds meaning and purpose in life will remain in some sense healthy through physical decline and death. What most enriches our lives is also good for our health, and no society can grow healthy individuals if it does not foster personal hope, optimism, commitment and self-worth.

It is interesting to note that some people seem to be comfortable in almost any situation. They seem calm and collected even when they make the most important decisions. They project a sense of quiet confidence and seem to have overcome the fears and stresses most others associate with modern life. Many of these people have felt the same anxiety that others feel, but they have cultivated ways of relaxing even in the most difficult situations. Instead of focusing on the fears and anxieties of life, they view life as an opportunity for more than just coping. They still see life as a challenge — but one to be enjoyed.

Our emotions result entirely from the way we look at things. It is an obvious neurological fact that before we can experience any event, we must process it with the mind and give it meaning. We must understand what is happening to us before we can feel it. If our understanding of what is happening is accurate, we will be more in control of our emotions. If our perception is twisted and distorted in some way, we will be less in control of our emotional responses.

Those who believe they are in control of events, committed to their work and other life goals, and invigorated and challenged by change are less likely to be knocked off course by bumps and curves along life's road. Such people also tend to be optimistic, see more good in life than bad and feel hope more often than helplessness.

Science is now rediscovering the connections between feelings, thoughts, personality and health. Research refutes the idea that personality is somehow separate from the body. For example, breast cancer patients who receive group social support may live on average twice as long as those who do not. Other experiments have revealed that hypnosis can hasten the healing of burns, laughter can strengthen immune systems and diabetics can lower their need for insulin with deep relaxation techniques.

Personality types

Psychologists have sketched out personality types associated with heart disease, and studies linking psychological factors to illness and immune function now number in the thousands. This does not, of course, prove that humans can heal themselves of cancer or other disease. Nor does it prove that illness is "all in the head" or that we cause our own sicknesses.

What the studies do suggest, however, is that feelings and emotions influence health, and that the body's healing system may be far more powerful and complex than we have ever dared to imagine. Research is revealing a long association that healing has with faith, belief, spirit, family, personality and the web of everyday life.

The writer is the Work/Life Program manager at the Career Transition Assistance Program Center at NASA Headquarters in Washington, D.C.

NASA names 'TGIR 2000' award recipients

NASA's Office of Aerospace Technology May 18 presented awards to NASA and industry partnerships that have developed outstanding aeronautics and space transportation technologies.

The awards are for achievements related to health and safety, cost reduction, technical innovation and environmental concerns. The ceremony was part of the second "Turning Goals into Reality" (TGIR) conference, hosted by the Marshall Center.

"The work of these recipients represents the finest achievements of NASA and its industry partners," said Marshall Center Director Art Stephenson. "Their contributions to NASA's development and implementation of new, safe, cost-effective aerospace transportation technologies continue to uphold our finest traditions of leading-edge technical achievement."

Founded in 1997, the awards celebrate advances in three categories, or technology "Pillars" — Global Civil Aviation, Revolutionary Technology Leaps and Advanced Space Transportation. Ten subcategories — or "Goal" awards — honor nominees whose work represents exceptional achievement in specific areas of research related to health and safety, environmental concern, cost reduction or technical innovation.

The conference marks the second time the awards have been presented.

Award-winning research and development technologies include:

• Aviation Safety Award: "Fatigue Countermeasures Program Research"

• Aviation Emissions Reduction Award: "Low Nitrogen Oxide Combustor Development"

• Aviation Noise Reduction Award: "Tiltrotor Noise Abatement"

• Aviation System Throughput Award: "Collaborative Arrival Planning Research"

• Affordable Air Travel Award: "Airborne Information for Lateral Spacing Research"

• High Speed Travel Award: "High Fidelity Numerical Aero Design/Optimization"

• Next-Generation Design Tools Award: "Advanced Probabilistic Design Methods Development"

• Next-Generation Experimental Aircraft Award: "High Speed Research Program/Tu-144 Project"

• Revolutionary Technology Leaps Award: "Enabling Propulsion Materials"

• Low Cost Space Access Award: "Fastrac Engine Development"

• Access to Space Award: "SHARP High-Temperature Materials Flight Test"

• Administrator's Award: "NASA Intercenter Systems Analysis Team"

For a complete overview of the awards and the full list of participating NASA Centers and industry organizations included on the winning teams, visit the "Turning Goals into Reality" Web site at:
http://tgir.msfc.nasa.gov/2000awards.html

Fastrac

Continued from page 1

the length of time it will be required to perform during an X-34 flight. System level testing is being conducted now at Santa Susana Field Laboratory in Ventura County, Calif., while component testing continues at the Marshall Center.

NASA's industry team for design, development and manufacture of the Fastrac engine includes Summa Technology Inc. of Huntsville, which builds components such as the gas generator, propellant lines, ducts and brackets and assembles the engines; Allied Signal Inc. of Tempe, Ariz., and Marotta Scientific Controls Inc. of Montville, N.J., which supply valves; Barber-Nichols Inc. of Arvada, Colo., which builds the turbopump; and Thiokol Propulsion, a division of Cordant Technologies Inc. of Salt Lake City, Utah, which builds the chamber nozzle.

Photo by Doug Stoffer, NASA/Marshall Space Flight Center

The Fastrac development team members, from left, are Ron Unger of Summa Tech; Mike Ise of Marshall's Space Transportation Directorate; and at right, Steve Taylor of Stennis Space Center, Miss. Samuel L. Venneri, associate administrator in NASA's Office of Aerospace Technology, second from right, presented the award.

Aerospike engine sets new duration record

The linear aerospike engine that will power the X-33 technology demonstrator vehicle set a new duration record of 290 seconds in an abbreviated test at the Stennis Space Center in Bay St. Louis, Miss., May 12. The longest previous test was 263 seconds in duration.

The X-33 is being developed in a partnership between NASA and Lockheed Martin Aeronautics Company in Palmdale, Calif. The Marshall Center manages the X-33 program for NASA.

The test, which was planned to last 325 seconds, was terminated 35 seconds early when a flexible seal that prevents hot exhaust gas from circulating into the engine cavity began to erode. Post-test inspections have revealed no other damage to the engine or supporting hardware.

The high-stress condition under which the flex seal eroded – low power operation at sea level — is test-peculiar and would not be present during flight. Additionally, the seal was previously hot-fired and exposed to engine exhaust for 775 seconds, the equivalent of more than three flights. Engineers are assessing the erosion to determine what action is needed.

"Despite the abbreviated test, almost all of our test objectives have been met," said Mike McKeon, program manager for the XRS-2200 aerospike engine at the Rocketdyne Propulsion & Power business of The Boeing Company. "We are now reviewing the program and will decide if we need to conduct an additional single-engine test, or pick up the last couple of objectives during the dual-engine phase of the program." This test was the last of 14 planned in the single-engine phase of the engine's flight certification program.

The XRS-2200 engine was developed and assembled by Rocketdyne at Canoga Park, Calif., and Stennis. The engine will power the X-33, a half-scale, sub-orbital technology demonstrator of Lockheed Martin's proposed, commercial reusable launch vehicle called VentureStar™.

Upcoming Events

'Take Our Children to Work Day' — Marshall will celebrate "Take Our Children to Work Day" June 22. Parents may bring their children in grades 3-12 to their respective work sites, and participate in a free pizza lunch from 11:30 a.m.-1 p.m. at the Bldg. 4752 picnic area. This year's theme is "Free to Be You and Me." Register your child on "Inside Marshall." Registration ensures a badge will be ready for pickup at the Bldg. 4200 lobby security desk and lunch for you and your child. For more information, call Billie Swinford at 544-0087.

Write in Plain English — A "Write in Plain English" course will be June 13-14 in Bldg. 4200, room G-19. This course focuses on improving writing skills and producing clearly written documents. This two-day course is learner-centered and loaded with practical techniques, tip sheets and guidelines to improve your writing skills. The course is tailored to meet individual needs. Attendees should submit a two-page work sample to Stephanie Elliott, CD20, no later than May 31. Civil servants should register via AdminSTAR. For more information, call Vanessa Suggs at 544-7527 or Stephanie Elliott at 544-7553.

Advanced Space Propulsion Workshop — The Marshall Center and the Jet Propulsion Laboratory in Pasadena, Calif., are co-sponsoring the 11th Advanced Space Propulsion Research Workshop May 31-June 2. This year's workshop will be at the Laboratory. Speakers from NASA, Department of Defense, Department of Energy, industry and academia will discuss the latest advanced propulsion research and technology development activity. Topics include space sails, tethers, beamed energy, antimatter, ion drives and solar thermal propulsion. For more information, visit the Web site at: http://apc2000.jpl.nasa.gov/

Flight crew named for future Space Station mission

Veteran astronaut James D. Wetherbee, a captain in the U.S. Navy, will command the eighth Space Shuttle mission to visit the International Space Station on a flight in 2001 to rotate Space Station crews and continue its assembly.

Joining Wetherbee on the flight deck for STS-102 aboard Discovery will be Pilot James M. Kelly, a lieutenant colonel in the U.S. Air Force. Rounding out the crew are mission specialists Dr. Andy Thomas, Paul Richards, and previously assigned Space Station Expedition 2 crew members, Yuri V. Usachev, retired Army Col. James S. Voss and Air Force Col. Susan J. Helms.

The major objectives of the mission are to replace the Space Station Expedition 1 crew members Bill Shepherd, Yuri Gidzenko, and Sergei Krikalev with the Expedition 2 crew; perform two Space Station assembly spacewalks; and deliver equipment for the U.S. Destiny Laboratory Module on the first flight of the Italian-built Leonardo logistics module.

STS-102 will be Wetherbee's fifth mission, and his fourth as commander. Selected as an astronaut in 1984, he flew as pilot on STS-32 in 1990, and as commander on STS-52 in 1992, STS-63 in 1995, and STS-86 in 1997. Thomas first flew in space on STS-77 in 1996, and then was carried to the Mir space station aboard STS-89 in 1998 and returned aboard STS-91 after 141 days in space.

Kelly and Richards, selected as astronauts in 1996, will be on their first space mission.

Technical and Business Exhibition and Symposium

Marshall programs highlight TABES

Marshall employees are among the presenters May 30 at the Technical and Business Exhibition and Symposium (TABES) being held through June 1 at the Von Braun Center South Hall.

Dr. Row Rogacki

Robin Henderson

Jim Bilbro

Sally Little

Dr. Row Rogacki, director of Marshall's Space Transportation Directorate, will present "Developing a Highway to Space" from 1:10-1:40 p.m. Learn about the technologies that NASA is developing with U.S. industry to dramatically increase the safety and reliability and reduce the cost of access to space.

Robin Henderson, deputy manager of the Microgravity Research Program Office, will discuss "Microgravity: Developing the Materials and Medicines of the Future" from 1:40-2:10 p.m. Learn how NASA-sponsored research is spawning new materials and medicines that are enhancing our lives on Earth.

Jim Bilbro, special assistant for Optics at Marshall, will talk about "Space Optics: Opening Windows into the Unknown" from 4:20-4:40 p.m. Learn how Marshall's world class optics capabilities have enabled a revolution in astronomy using the Hubble Space Telescope and the Chandra X-ray Observatory and what lies in store for the future.

Sally Little, manager of Marshall's Technology Transfer Department, will present "Transferring Technology to American Industry" from 4:40 –5 p.m. See how NASA-sponsored technology is being transferred to U.S. industry to enhance our global competitiveness.

On June 1, NASA Administrator Dan Goldin will speak at 12:30, during the luncheon. From 2:15-3:45 p.m. in the South Hall, Dr. James Burke will present "Discovering New Frontiers." Burke is the author and host of numerous articles and television programs on science and technology.

The two-day symposium concludes a series of small concerts and art presentations, part of the Von Braun Celebration of the Arts and Sciences from 3:45-4:30 p.m.

For more information, call 544-4918.

While surveying distant galaxies

Chandra provides evidence for vigorous starbursts

Using the Marshall-managed Chandra X-ray Observatory, astronomers have made the first long-duration X-ray survey of the Hubble Deep Field North. They detected X-rays from six of the galaxies in the field, and were surprised by the lack of X-rays from some of the most energetic galaxies in the field.

The X-ray emitting objects discovered by the research team are a distant galaxy thought to contain a central giant black hole, three elliptically shaped galaxies, an extremely red distant galaxy and a nearby spiral galaxy.

"We were expecting about five X-ray sources in this field," said Professor Niel Brandt of Pennsylvania State University in University Park, and one of the leaders of the research team that conducted the survey. "However, it was very surprising to find that none of the X-ray sources lined up with any of the submillimeter sources."

The submillimeter sources are extremely luminous, dusty galaxies that produce large amounts of infrared radiation. Because they are more than 10 billion light years from Earth, their infrared radiation is shifted to longer, submillimeter wavelengths as it traverses the expanding universe. The primary source of the large power of the submillimeter sources is thought to be an unusually high rate of star formation, or the infall, or accretion of matter into a giant black hole in the center of the galaxy. X-ray observations provide the most direct measure of black hole accretion power. X-rays, because of their high energy, would be expected to pass through the gas and dust in these galaxies, unlike visible light.

"With Chandra we have been able to place the best X-ray constraints ever on submillimeter sources," said Ann Hornschemeier, also of Penn State, and the lead author of an upcoming Astrophysical Journal paper describing the discovery. "Our results indicate that less than 15 percent of the submillimeter sources can be luminous X-ray sources."

"That means," Brandt explains, "either there is an enormous amount of star formation in those galaxies, or these objects contain the best-hidden black holes in the universe."

Chandra's increased spatial resolution — the capability to concentrate X-rays into a smaller area — also increases its sensitivity for detecting fainter X-ray sources than ever before. "Many of our sources are fainter than any source that was detected in the deepest observations by all previous X-ray observatories," Hornschemeier says.

Open House 2000

More than 31,000 visitors tour Marshall attractions

Last Saturday's Open House was an exciting time for the Marshall Center! And you, the Marshall Team, demonstrated again what we can accomplish when we put our hearts and minds together and work as a team.

More than 31,000 people got a close look at the innovative technologies that drive our nation's space program. Very importantly, about half of these were children. The looks of excitement and wonder on their faces demonstrated that in a very real way the Open House helped to further one of NASA's primary goals — to inspire and motivate our young people to pursue careers in engineering, science, mathematics and technology.

I am very proud of the manner in which so many of you supported this effort. And I would like to say a special thank you to Thom Holden of the Employee and Organizational Development Department and his entire team for the hard work, dedication and commitment that allowed us to celebrate with our families, friends and supporters the exciting accomplishments of the Marshall Space Flight Center.

Art Stephenson
Marshall Center Director

Cub Scout Troop 88 came from Missouri to attend Marshall's Open House.

A Model Rocket Club member prepares a rocket for launch from Pad No. 6.

Huntsville Mayor Loretta Spencer, left, and Marshall Center Director Art Stephenson and his wife, Loa Stephenson, enjoy the opening ceremony.

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Open House

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Astronauts and other celebrities added to the festivities.

Sheila Cloud, left, director of Marshall's Center Operations Directorate; Tereasa Washington, center, director of the Customer and Employee Relations Directorate; and Marshall Deputy Director Carolyn Griner "get down."

Charles Kilgore of Marshall's Facilities Engineering Department, right, explains to visitors the merits of the Tek iceberg storage in Bldg. 4663.

Visitors try their hand at controlling the X-tractor robot, designed by students at Lee and Bob Jones high schools for a recent competition.

Alabama artist Daniel Moore signs autographs for fans while Oscar the Robot looks on.

Center Director Art Stephenson, left, Marshall retiree Fred Wojtalik, center, and Gloria Tyson, Alabama district manager of the U.S. Postal Service, unveil the Hubble Space Telescope cachet.

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Open House

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Photos by Tony Triolo, Doug Stoffer and Emmett Given, NASA/Marshall Space Flight Center

Astronaut Tracy Caldwell signs a shirt for Jeannine Norman of Computer Sciences Corp.

"Elvis," the Alabama Pelvis, was one of many entertainers appearing Saturday.

Passengers disembark from Morphis, the virtual reality ride.

Visitors are treated to a demonstration of the magnetic levitation track in Bldg. 4656.

Olivia Hendrick, daughter of Shar Hendrick, manager of Marshall's Government and Community Relations Department, keeps her alien friend close by as she looks at the sights.

Space enthusiasts get information on NASA's new generation of space vehicles in Bldg. 4753.

Marshall celebrates Space Day May 4

Celebrating the accomplishments of NASA and other aerospace science entities, Marshall's Educator Resource Center and the U.S. Space & Rocket Center invited 26 teachers and 26 students from across Alabama and southern Tennessee as part of International Space Day activities on May 4.

Dr. Barbara Anthony, an education specialist with Ai Signal Research Inc., conducted an Earth-To-Orbit Design Challenge Workshop for teachers while the Space & Rocket Center staff directed a rocket building activity for students.

Photo by Terry Leibold, NASA/Marshall Space Flight Center

Dr. Barbara Anthony, left, shows area teachers how to prepare for the thermal protection experiment at Marshall's Discovery Lab.

X-40A

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The X-37 is designed to demonstrate technologies in the orbital and reentry environments for next-generation reusable launch vehicles that will increase both safety and reliability, while reducing launch costs from $10,000 per pound to $1,000 per pound.

The X-37, carried into orbit by the Space Shuttle, is planned to fly two orbital missions in 2002/2003 to test reusable launch vehicle technologies.

"Delivery of the X-40A is an important step toward getting us ready for our first unpowered X-37 test flight in 2001, then orbital flights," said Susan Turner, X-37 project manager at the Marshall Center. "The X-40A tests at Dryden will ensure that the X-37 mission is safe and successful."

"We are extremely proud of our team and the work they have done to improve and enable delivery of the X-40A to Dryden Flight Research Center," said Dick Cervisi, Boeing X-37 program manager. "In order to support the test goals of X-37, the X-40A has received a number of modifications including improved instrumentation and telemetry, a new integrated INS/GPS payload, upgraded power systems, and additional redundancy for range safety."

Courtesy photo

Workers at The Boeing Company in Seal Beach, Calif., modify the X-40A vehicle prior to delivering the test plane to Dryden Flight Research Center.

The X-37 government team, led by the Marshall Center, includes NASA's Ames Research Center in Mountain View, Calif.; Johnson Space Flight Center in Houston, Tex.; Kennedy Space Center at Cape Canaveral, Fla.; Goddard Space Flight Center in Greenbelt, Md.; Langley Research Center in Hampton, Va.; Dryden Flight Research Center and USAF's Air Force Flight Test Center, both at Edwards Air Force Base in Edwards, Calif.; and the Space and Missile Systems Center and the Air Force Research Laboratory in Albuquerque, N.M. The X-37 industry team is led by Boeing at Seal Beach.

The writer, employed by ASRI, supports the Media Relations Department.

Two ways to buy Bonds

Marshall kicked off Savings Bond Month May 9. Civil servants can purchase Series EE Bonds through payroll deduction. I Bonds can be purchased at any bank.

The 5.73 percent Series EE savings bond rate is in effect for bonds issued on or after May 1, 1997, that enter semiannual earnings periods from May through October 2000. A new interest rate is announced effective each May 1 and November 1. A three-month interest penalty is applied to these bonds if redeemed before five years.

The earnings rate for I Bonds is a combination of a fixed rate, which will apply for the life of the bond, and the inflation rate. The 7.49 percent earnings rate for I Bonds bought from May through October 2000 will apply for the fist six months after their issue. The earnings rate combines the 3.60 percent fixed rate of return with the 3.82 percent annualized rate of inflation as measured by the Consumer Price Index for all urban consumers.

I Bonds are designed to offer all Americans a way to save that protects the purchasing power of their investment by assuring them a real rate of return over and above inflation. They are sold at face value in denominations of $50, $75, $100, $200, $500, $1,000, $5,000, and $10,000 and earn interest for as long as 30 years. I Bond earnings are added every month and interest is compounded semiannually. They are state and local income tax exempt, and federal income tax on I Bond earnings can be deferred until the bonds are cashed or they stop earning interest after 30 years.

For more information on savings bonds visit the Web at: www.savingsbonds.gov

★ ★ ★
Marshall Star
★ ★ ★

Marshall retiree ***Clyde Foster,*** a former Equal Employment Opportunity director, was inducted into Alabama A&M University's Alumni Hall of Fame earlier this month. He retired from Marshall in 1986. Foster, who received a bachelor of science in chemistry and mathematics from A&M in 1954, is the founder and president of PrepTech Inc., which specializes in packaging, repackaging, refurbishing and shipping for third parties. While employed at Marshall, he helped establish the undergraduate computer science program at A&M. Foster also served 20 years as mayor of Triana.

Clyde Foster

Photo by Doug Stoffer, NASA/Marshall Space Flight Center

Energy Saver

Cedreck Davis, right, of Marshall's Facilities Engineering receives the Department of Energy's Energy Champion Award from Center Director Art Stephenson May 15. The award is for promoting energy conservation in federal facilities.

Two program, project management classes set

Project Implementation will be from 8:30 a.m.-4 p.m. July 10-14 at Marshall. This course emphasizes the Implementation Sub-Process of NASA's Provided Aerospace Products and Capabilities (PAPAC) Cross-Cutting process. It focuses on executing a well planned, baselined project using the Program and Management Systems Requirements described in NPG 7120.5A.

NPG 7120.5A Implementation will be from 8:30 a.m.-4 p.m. May 31, June 22 and Aug. 22, in Bldg. 4200, room G-21. This course familiarizes program and project personnel with the NASA Program/Project Management Process and how they fit into that process.

For more information, call Renee Higgins at 544-8864.

Neuromuscular therapists on staff at Marshall Activities

The NASA Exchange now has two on-site neuromuscular therapists at the Marshall Activities Bldg. 4752 to provide revitalizing relief from stress; immune system support; and pain relief for the upper and lower back; head, neck and shoulders; wrist and arm (mouse arm, Carpal Tunnel Syndrome); and hips, knees and ankles.

Neuromuscular therapy also provides enhanced circulation and vitality, and assessment and treatment of rotator cuff pain, tears and tendinitis; muscle strains and muscle pulls; and ligament sprains.

On-site neuromuscular services are provided by appointment by Katherine Harris and Jeffrey Rich, both of whom are licensed neuromuscular therapists. Additionally, Harris and Rich have received extensive advanced training in their disciplines in special areas of interest.

Appointments are available by calling Harris at 920-9104 or sending e-mail to: katherine 2525@hotmail.com or Jeffrey Rich at 337-1699 or jeffrey@vallnet.com. A 24-hour notice of appointment cancellation is required to avoid charges.

Fees are 15-minute chair massage, $15; 30-minute area-specific massage, $20; 60-minute massage, $40; and 90-minute massage, $60. Gift certificates are available.

Obituaries

Dearing, Waldo H. Jr., 79, of Moraga, Calif., died March 25. He retired from Marshall in 1977 where he was deputy manager from the National Space Technology Laboratories, now the John C. Stennis Space Center, in Miss. He is survived by his wife, Lila Jean, and two daughters, Dannie E. Elwood and Judith J. Roseberry.

Turner, Robert E., 71, of Huntsville, died April 28. He retired from Marshall in 1984 where he worked as a supervisory space scientist. He is survived by his wife, Ann L. Turner.

Rosinski, Werner K., 85, of Huntsville, died May 14. Rosinski was an original member of the von Braun rocket team. He retired from Marshall in 1970. He is survived by his wife, Erika Rosinski, and son, Klaus Rosinski of Gulf Breeze, Fla.

Sports

MARS Fishing Club — Results of the May 20 bass tournament at Guntersville are: first place — Deon Smith and Ross Evans, 14.66 lbs.; second place — Charlie Cothran and Alex Rawleigh, 9.07 lbs.; third place — Charlie Nola and Ron Olsen, 6.2 lbs.; and big fish, Ross Evans — 5.44 lbs. The next tournament will be held on Wheeler Lake at the Decatur boat harbor on June 10. For information, call Ross Evans at 961-2305, Don McQueen at 544-9073 or Charlie Nola at 544-6367.

NASA Ski Week — The 10th annual NASA Ski Week will be hosted at Snowmass Jan. 20-27, 2001. Skiers from eight NASA centers will gather at this Colorado resort for camaraderie and winter sports at four different resorts constituting 4,800 skiable acres (including Aspen). All Marshall employees, on-site contractors, retirees and dependents are eligible to participate. Interested persons are encouraged to call 1-233-0705, or request additional information by e-mail at: Thomas.S.Dollman@msfc.nasa.gov

MARS Softball Club — The MARS Softball Club is looking for players. There are three divisions of skill:

- Division 1 is for competitive teams. Players are young and fast. Call Jim Lomas at 544-8305.
- Division 2 is for recreational level Teams. Teams have the competitive spirit, just not as strong and fast as Division 1. Call Bill Telesco at 961-1461.
- Division 3 is for Coed teams. Call Leigh Young at 544-1744.

The teams average playing once per week and games are schedule at 5 or 6 p.m. No games are scheduled on Fridays. If interested, call the division commissioner for the league you want to join.

MARS Golf — A two-person best score tournament will be 8 a.m. June 3 at Chesley Oaks. Deadline to register is Friday. The Mars Golf Club is open to all NASA employees, onsite contractor personnel and NASA retirees. Events will be conducted in a variety of tournament formats. Some tournaments may have limited entries. Upcoming tournaments include:

- A two-person best score, 8:04 a.m., June 24 at Goose Pond. Deadline to register is June 16.
- A championship tournament, 9 a.m., July 22-23 at Colonial. Deadline to register is July 14.

For more information or to enter a tournament, call Lee Foster at 544-1589, Joey Butler at 544-3808 or Robert Rutherford at 544-8117. Entry fees are $5.

Employee Ads

Miscellaneous

★ Canary, red factor, female $60. Two bird cages: $20, $35. 534-5653
★ Leather couch and two arm chairs, $300. 461-8706/Stefan
★ Ethan Allen blue leather wing back chair, $100; antique Brentwood rocker, $125. 882-6832
★ Sofa and matching loveseat, teal and peach print, $400. 883-5168
★ Yellow gold, heart-shaped, diamond ring, 14K, size 7, .48 carat tiffany setting, $1,000. 830-1672
★ Violins, full and 3/4 size, new, old, and very old, $100 to $200. 534-8186
★ Rattan dinette suite, $125; mixed set golf clubs and bag, $25; tennis racket, $20. 536-8951
★ Kenmore stove, self-cleaning, used for 3 months. 461-8220
★ Graco Stroll-A-Bed and Swingamatic (battery powered), $40 each or both for $70. 461-9761
★ Epiphone Flying V bass guitar w/case, Korina wood, gold hardware, best offer. 306-0700
★ Two reclining patio chairs, hunter green resin, $10 each. 533-5942
★ Fender ultimate chorus guitar amp, 130W stereo chorus, two 12" speakers, $385. 971-0571
★ Washburn D-10 acoustic guitar, black w/ chipboard case, $200. 776-2612
★ Queen size hide-a-bed couch, neutral color, $350. 881-1186
★ Ring, 14K gold, size 7, 1K Chatam emerald w/1/10K diamond each side, $300. 721-4534
★ 1996 Layton 31' travel trailer, model 3050, living/dining room, slide-out, $12,500. 539-0570
★ Sea-Ray Seville, 18' w/140 I/O Mercruiser, SS-prop, trailer, built-in coolers/storage, am/fm cassette, skis, life vests, cover. 382-3922/586-6609
★ Naugahyde sofa, brown, 7'x3', $60. 461-7712
★ Service manual, 1996 Dodge RAM truck, 1500-3500, 2-4 wheel drive, $30. 883-5955
★ Big Bertha 1-iron, firm shaft, $40; biggest Big Bertha 10 degree driver, Pro-lite firm shaft, $190. 851-7406
★ Sofa, beige/brown/gold strips, $80; loveseat, blue, $25; girl's bike, 16", $20; weight bench w/ leg extension, $15. 880-0150
★ Schwinn ladies bicycle, 27", lightweight, 10-speed, rear rack, $60. 539-0094
★ Golf clubs, 848 tour classic irons, 3-SW, steel shafts, $170. 881-5642
★ Paintball marker, Tippman 98, flat-line barrel, full auto kit, power-feed, 14" J&J Ceramic barrel, $300. 922-5891
★ Golf clubs and bag, $40. 859-5475
★ 1996 Gulfstream Innsbruck travel trailer, 21', full bed plus twin, includes hitch hardware, $8,400. 881-5093
★ Colonel bed liner, 1998 and later F150, $50; 1968 Camaro RS project car, $500. 461-3803
★ Heavy duty car ramps, $10; air powered grease gun, $10; Coleman gasoline lantern, $10. 828-4564

Vehicles

★ 1986 BMW 535I, 5-speed, $3,100; mag wheels, four, w/15" low profile tires, $150. 837-4136
★ 1993 Chevrolet Cavalier station wagon, 11K miles, red, a/c, power locks, brakes & steering, $2,700. 464-7810/859-1547
★ 1987 Jeep Cherokee, Pioneer package, 4x4, 4.0L engine, 214K miles, $1,700. 379-3606
★ 1972 Chevy truck, SWB, orange & white, 350 engine/transmission, factory air, many new parts, $7,500 obo. 851-2929
★ 1977 Porsche 924, silver, 4-speed, sunroof, 136K miles, spare parts, $1,800 obo. 828-6213
★ 1983 Chevy custom van, one-owner, 118K miles, LWB, 4-captains chairs, sliding side door, $1,850 obo. 753-2278
★ 1994 Chevy Astro van, power doors/windows, 95K miles, $9,000. 851-8775
★ 1990 Cadillac Sedan DeVille, loaded, 116K miles, $5,000. 837-6109
★ 1974 Chevy truck, LWB, 350 c.i.d., manual transmission, p/s, a/c, stereo cassette, camper shell, $3,250. 534-2368

Wanted

★ Ford Probe GT, V-6, less than 40K miles. 722-0127
★ Copies of Discover Magazine, June 1999 issue. Will pay for them.
★ Roommate for 2-bedroom apartment in Madison. 971-0048
★ Boat motor (70-90HP), prefer Evinrude, Johnson, Yamaha; will buy boat, motor, and trailer. 883-4970

Free

★ To good home, Basset hound, 2-year, female, spayed, shots, recent physical, house-trained, well-mannered, accessories included. 890-1661
★ Firewood, oak and ash, in 5' lengths, you pick up. 881-4601

Center Announcements

☛ ***MARS Ballroom Dance Club —*** Waltz and tango lessons will be from 7-8 p.m. June 5, 12, 19 and 26 in the Parish Hall of St. Stephen's Episcopal Church at 8020 Whitesburg Drive. Beginner and intermediate classes will be taught at the same time. Cost is $6 per person per night. For more information, call Woody Bombara at 650-0200.

☛ ***Cafeteria prices increase —*** Effective June 1, there will be a modest increase in food prices at the cafeterias. Price increases are mainly for entrees, manager's specials and sandwiches. The increase is necessary because Southern Food Services is under a self-sustaining contract and has experienced a food and labor last increase in the last year.

Job Opportunities

Reassignment Bulletin 00-25-KP, Aerospace Engineering Technician, GS-206-039/11 (2 vacancies), Engineering Directorate, Structures, Mechanics and Thermal Department. Closes June 6.

Reassignment Bulletin 00-24-CL, AST, Mission Operations Integration, GS-801-13, Flight Projects Directorate, Flight Systems Department, Hardware Development & Integration Group. Closes June 1.

Reassignment Bulletin 00-26-KP, AST, Aerospace Flight Systems, GS-861-14/15, Systems Management Office, Systems Engineering Office. Closes June 7.

Reassignment Bulletin 00-27-KP, AST, Technical Management, GS-801-13 in the Engineering Directorate, Structures, Mechanics & Thermal Department. Closes May 26.

MSFC ES-07-00, Manager, Information Services Department, Center Operations Directorate closing date has been extended until June 8.

CPP 00-74-RE, AST, Technical Management, GS-801-15, Space Shuttle Projects Office. Closes June 6.

CPP 00-71-KP, Aerospace Engineering Technician, GS-802-12, Engineering Directorate, Structures, Mechanics and Thermal Department, Thermal and Fluid Systems Group. Closes June 6.

CPP 00-72-RE, AST, Aerospace Flight Systems, GS-861-15, Space Shuttle Projects Office, Eternal Tank Project Office. Closes June 7.

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